



REVIEWER'S REPORT

Manuscript No.: IJAR-58196

Title: COMPARATIVE MOISTURE ADSORPTION BEHAVIOUR AND ISOTHERM MODELLING OF SEED POWDERS FROM FOUR BAMBARA GROUNDNUT (VIGNA SUBTERRANEA L. VERDC.) CULTIVARS FROM CÔTE D'IVOIRE.

Recommendation:

- Accept as it is
- Accept after minor revision.....
- Accept after major revision**
- Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality			x	
Techn. Quality			x	
Clarity		x		
Significance		x		

Reviewer's ID: JPR- 171

Detailed Reviewer's Report

This study characterises moisture adsorption isotherms of four bambara groundnut cultivars and fits three models (GAB, Oswin, Chung-Pfost). The topic is relevant for legume processing and storage. However, several major issues require revision. First, the methodology lacks critical details: the preparation of saturated salt solutions, the time to equilibrium, and the precision of the gravimetric measurements are not described. Second, the statistical fitting procedure is poorly explained – the nonlinear regression algorithm, convergence criteria, and handling of replicate measurements are omitted. Third, the cultivar selection and their biochemical composition (protein, starch, fat, fibre) are not characterised, making it impossible to link observed hygroscopic differences to composition. Fourth, the monolayer moisture content values are reported with only two decimal places, which overstates precision given the experimental method. Fifth, the discussion of model selection relies heavily on R^2 alone, but the SEM and RMSE values are not interpreted relative to the experimental error. Sixth, the conclusion recommends storing powders at or below M_0 , but does not address practical factors like packaging permeability or temperature fluctuations. The authors must provide detailed methodology, include compositional data, and strengthen the practical implications for storage. A major revision is required.